

# Virginia's Highway Safety Corridor Program

Salem District  
December 2nd, 2003

Highway Safety Corridor Program



# Purpose

Reduce highway deaths and injuries

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# Background

- In 2002, 913 people died, 78,896 more were injured in highway crashes
- New VA Law helps State Police, VDOT, & DMV address safety in high crash locations
  - Increased fines - in most cases doubled

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# First Steps

- Hold public hearings on selection criteria
- Match selected criteria to “crash prone” locations
- Hold public hearings on proposed designated crash prone zones
  - Interstates addressed first-2003-2004
  - Primaries addressed next-2005-2006
- Hold regional focus groups for “best message” to change driving behavior

# Highway Safety Corridor Regions

## INTERSTATE CRASHES BY REGION

### 2000-2002

REGION 1 - WEST  
(483 interstate miles)  
7,821 Total Crashes

REGION 3 - NORTHEAST  
(214 interstate miles)  
16,944 Total Crashes

REGION 2 - SOUTHEAST  
(432 interstate miles)  
21,714 Total Crashes

A 'Crash' is a reported accident with \$1,000 or more of damage.

# Criteria Designated by Law

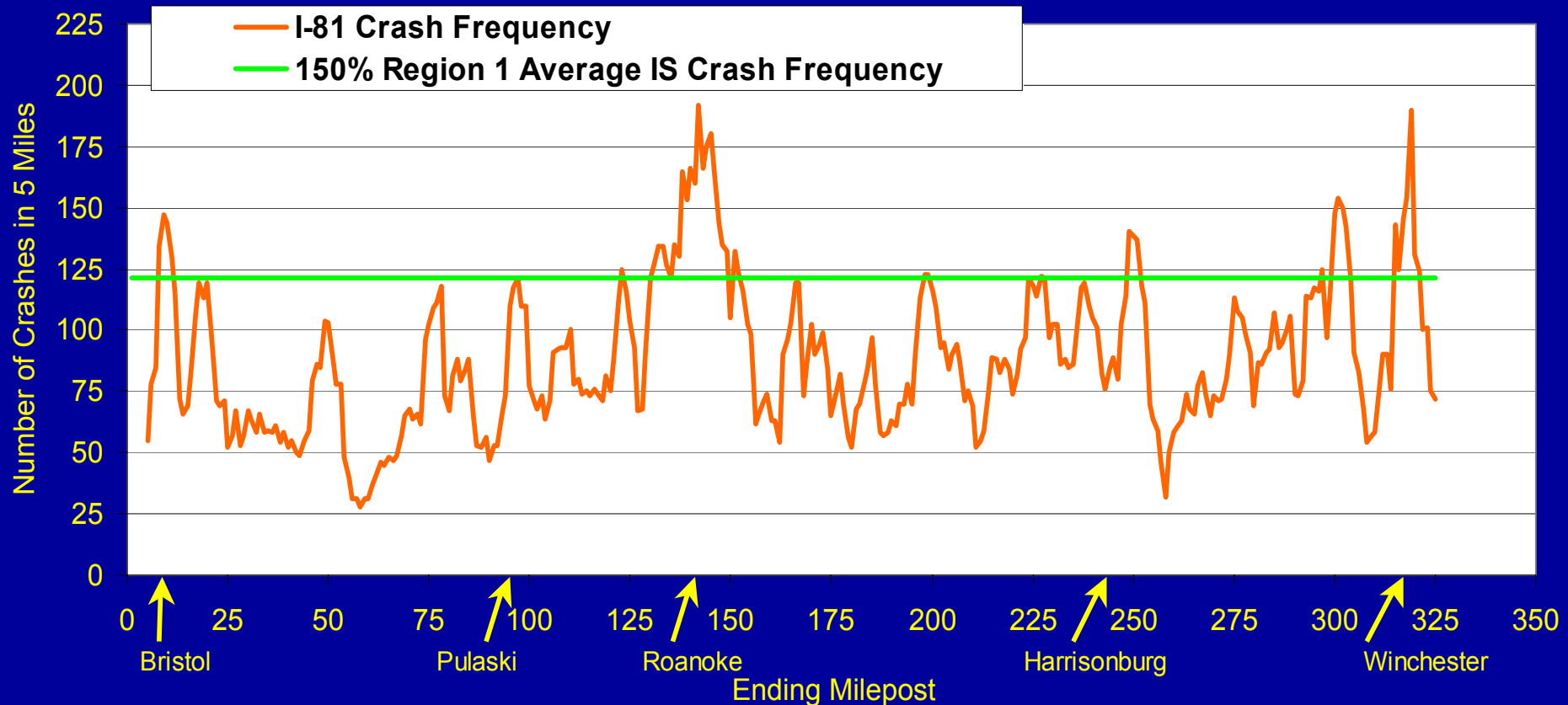
- Review of crash data
- Accident reports
- Type and volume of traffic
- Engineering and traffic studies

# I-81 Crash Frequency

- # Crashes along I-81 by mile-point
- Tennessee state line at left
- West Virginia state line at right
- Look at height and width of peaks
- Where above 150% of regional average

# I-81 Crash Frequency

(2000-2002 Crashes)



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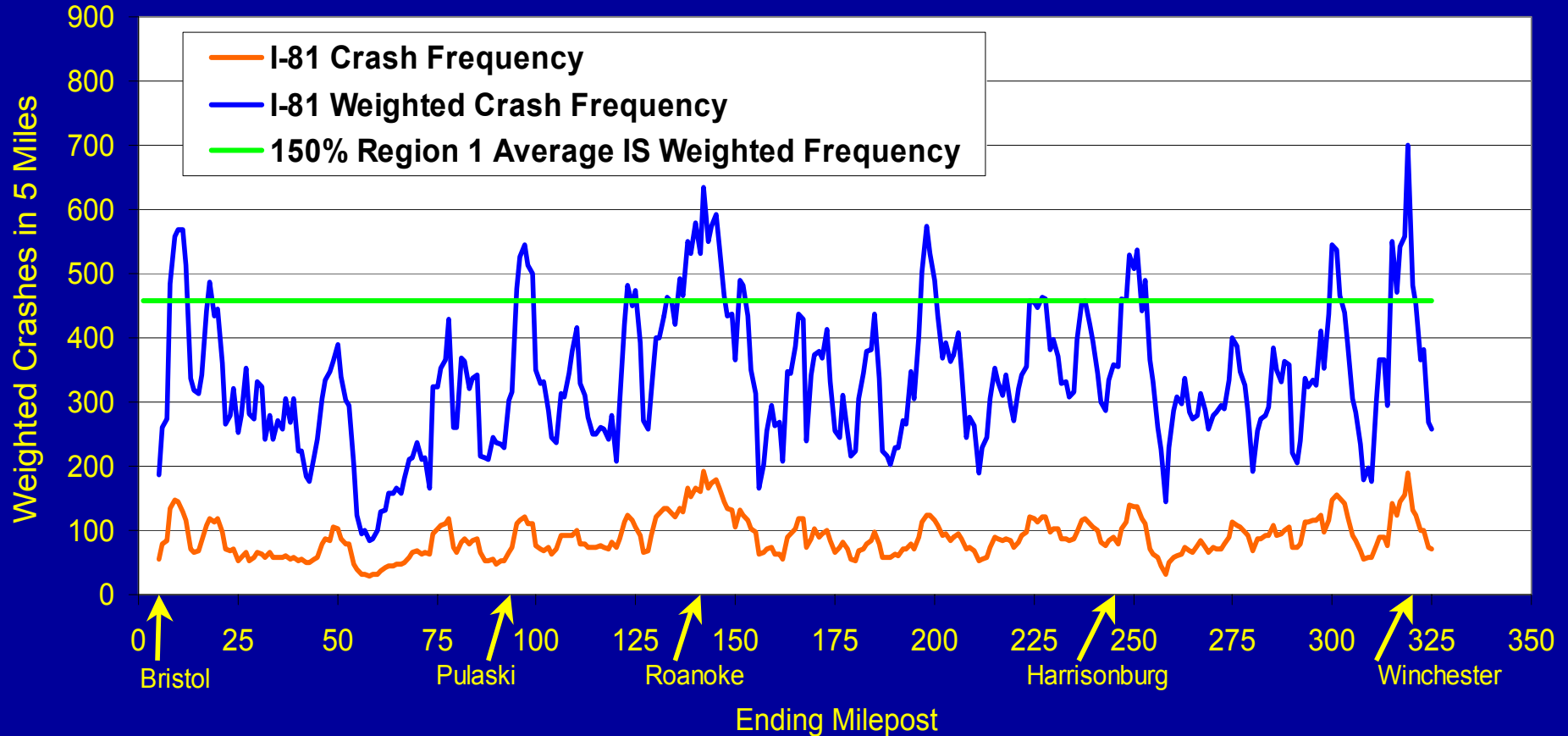


# I-81 Crash Frequency Weighted by Severity

- Previous slide – total # crashes
- Also need to consider severity of crash
- Give added emphasis to injury and fatal crashes
- Look at peaks where above 150% of regional average

# I-81 Crash Frequency Weighted by Severity

(2000-2002 Crashes, PDO=1, Injury=8, Fatal = 20)



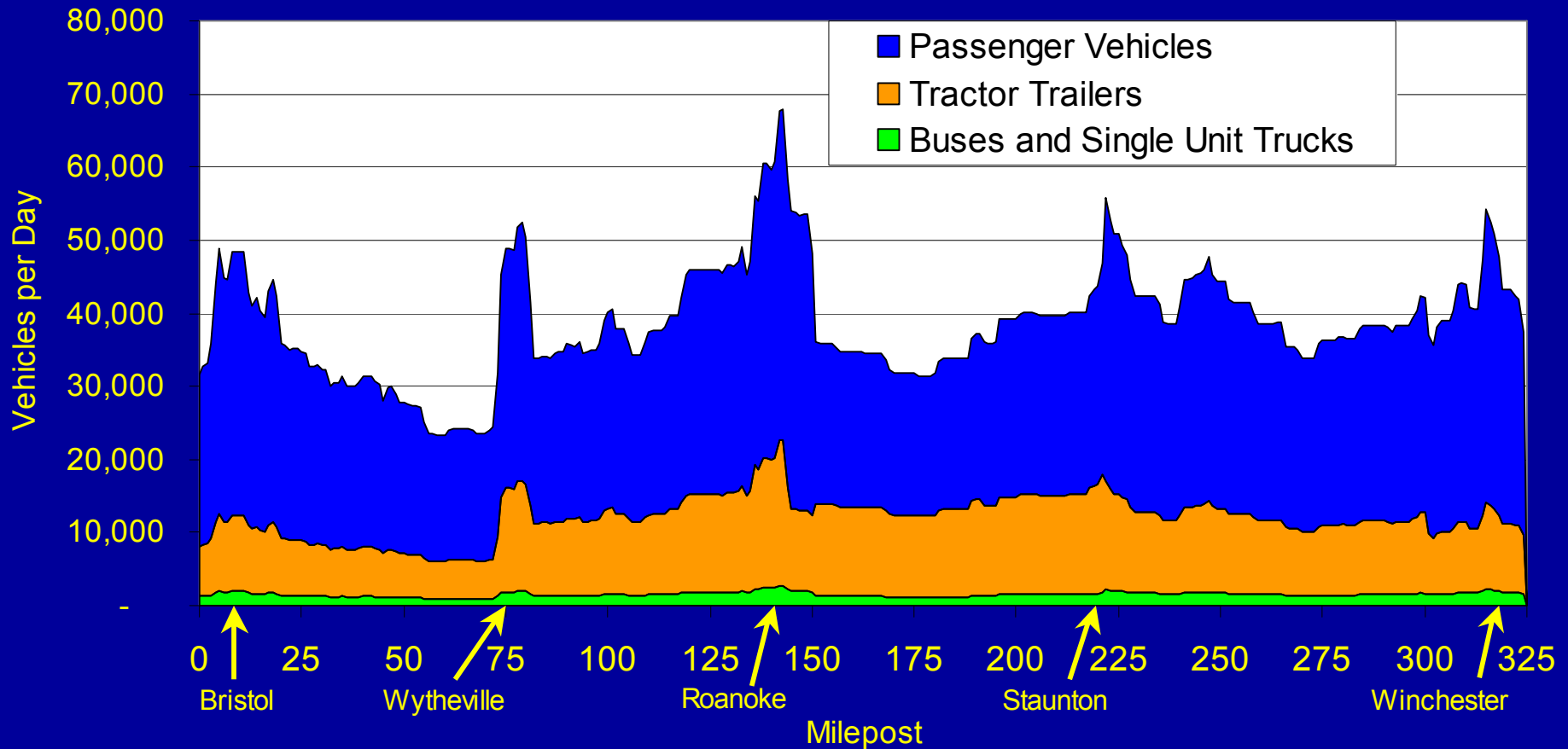
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# I-81 Vehicle Mix

- Tractor-trailers
- Other trucks and buses
- Passenger vehicles

# I-81 Vehicle Mix

I-81 Average Daily Traffic by Vehicle Type (2000-2002)



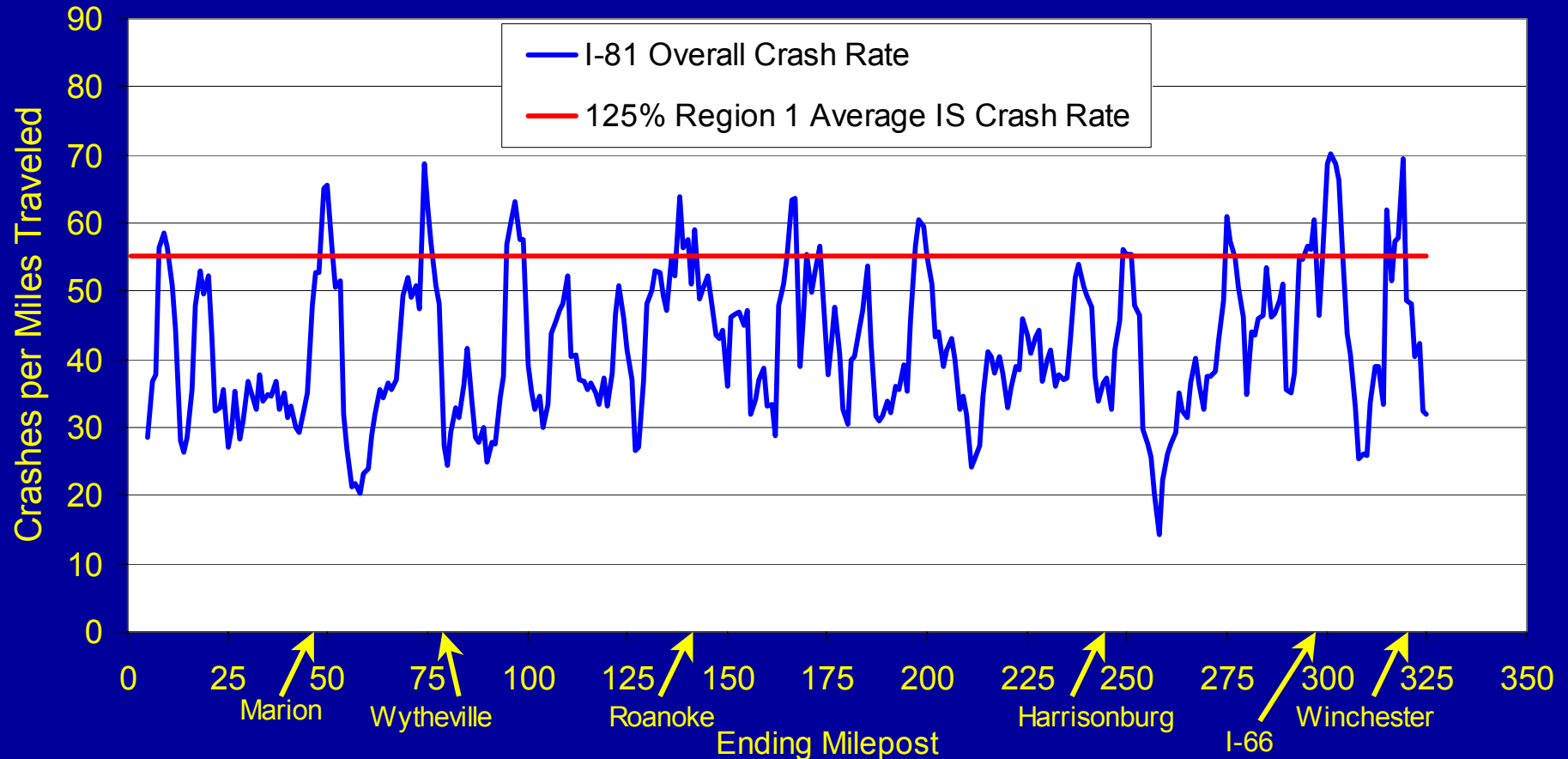
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# I-81 Crash Rates

- Adjust # crashes for # vehicles on road
- Compare high crash / high volume locations with lower crash / lower volume locations on more even basis

# I-81 Crash Rates

(2000-2002 Crashes)



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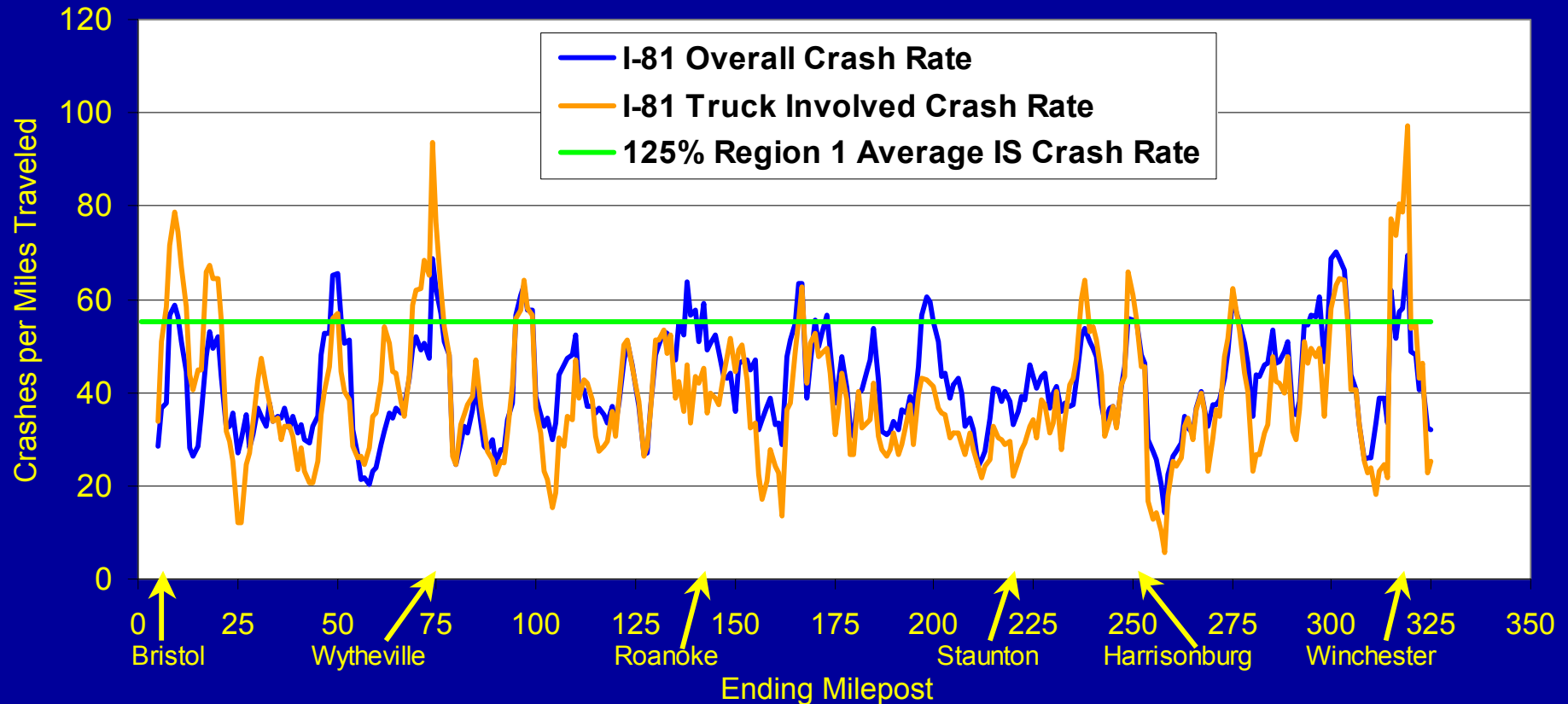


# Comparing Rates for Traffic Mix

- Overall crash rate versus truck-involved crash rate
- NOTE: Truck involved crash does not mean truck caused crash

# Comparing Rates for Traffic Mix

I-81 Crash Rate Comparison:  
All Traffic and Truck Involved (2000-2002 Crashes)



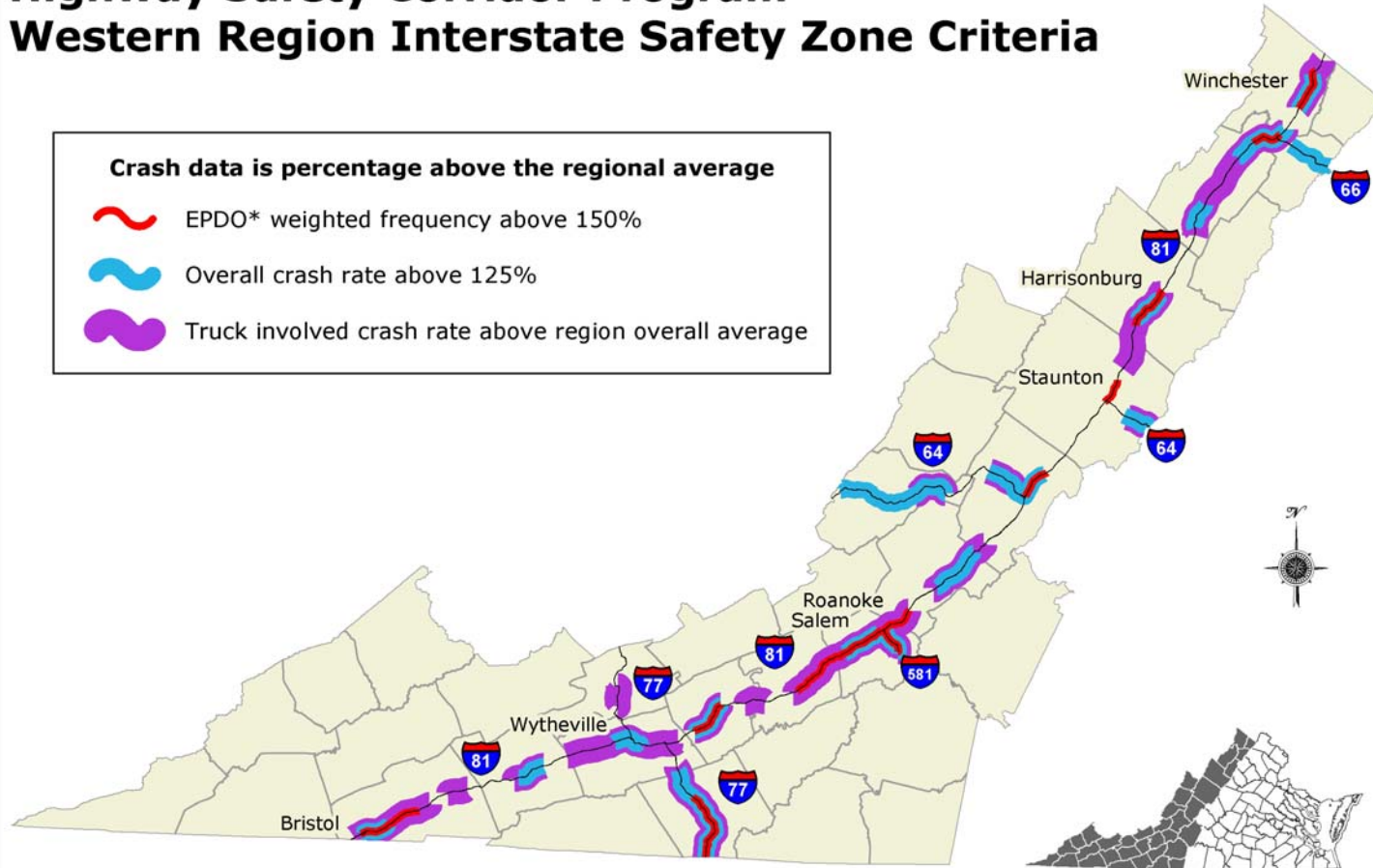
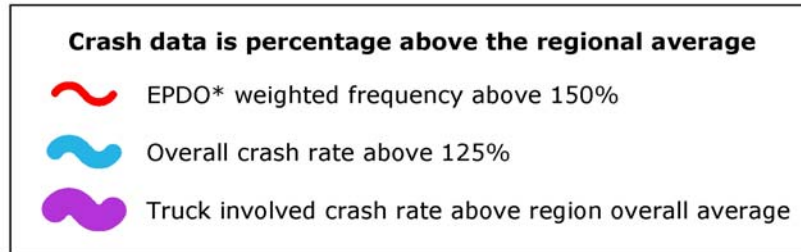
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# Proposed Safety Criteria

- Crash frequency
- Overall vehicle crash rate
- Truck involved crash rate
- Enforcement considerations
- Roadway characteristics

# Highway Safety Corridor Program Western Region Interstate Safety Zone Criteria



EPDO\* is equivalent property damage only crashes (PDO = 1, injury = 8, fatal = 20)

VDOT - Cartography Section - 10/03 - #32

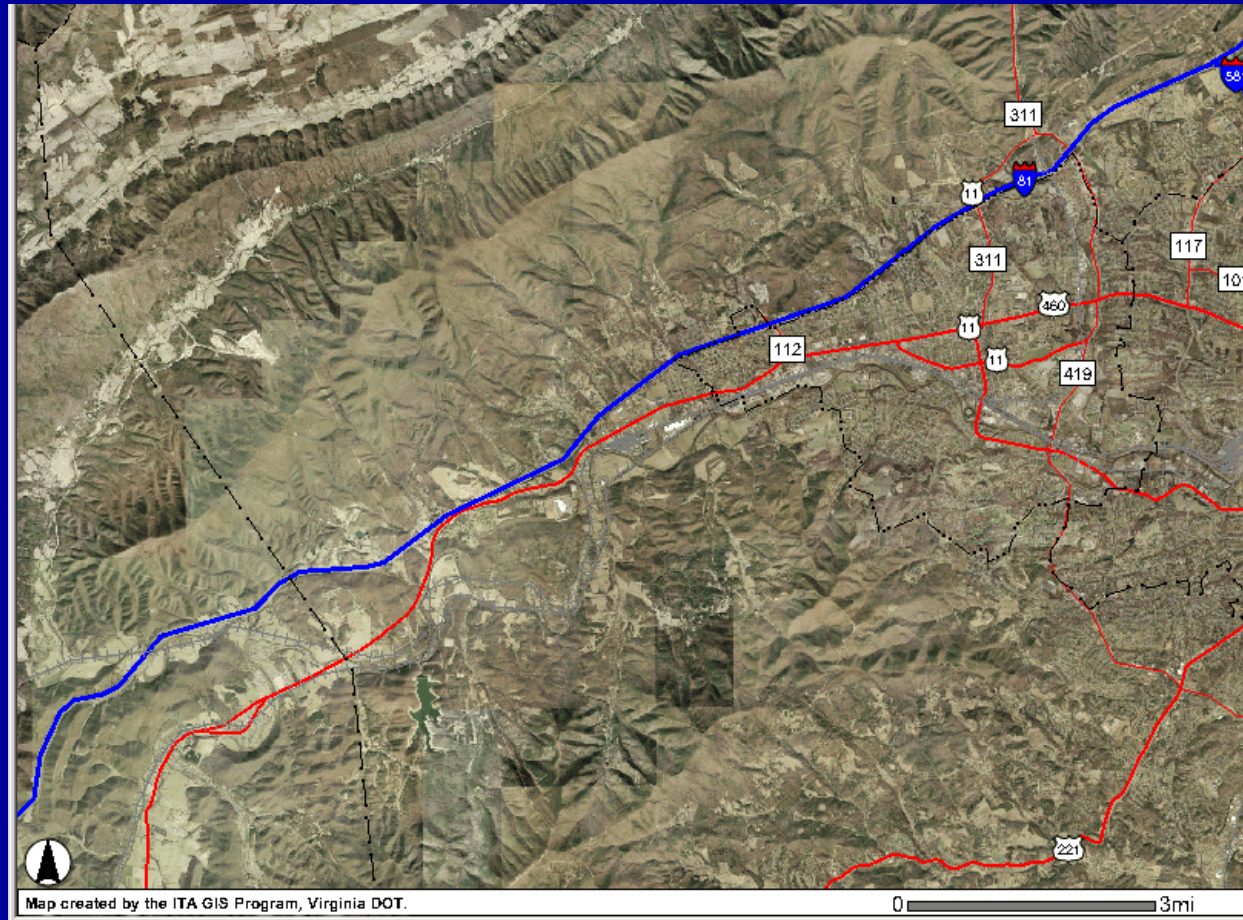
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# Proposed I-81 Zone

- **MP 127 to MP 142 – 15 Miles**
  - South of Rt 603/11 (Ironto) to South of I-581 (Roanoke)
  - In Roanoke and Montgomery Counties and Cities of Salem and Roanoke

# Proposed I-81 Zone

## MP 127 to MP 142



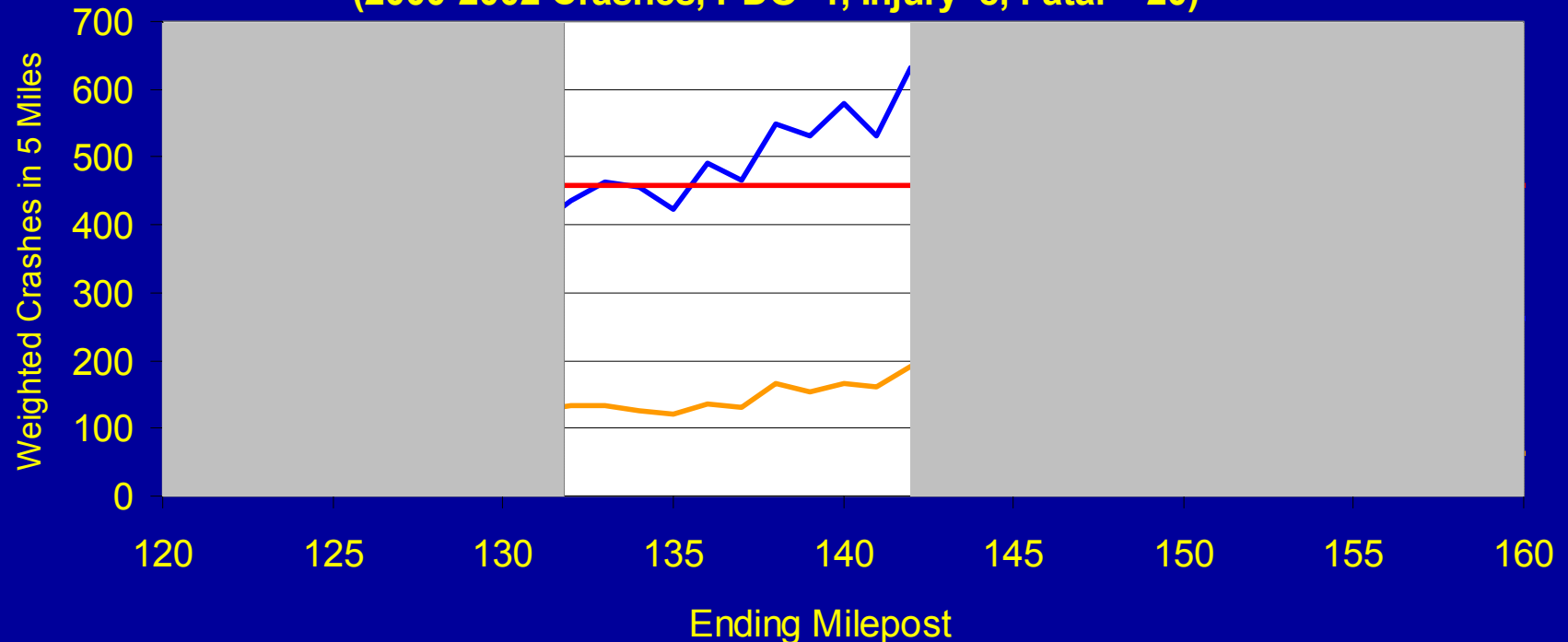
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# Safety Zone Crash Severity

I-81 Weighted Crash Frequency (MP 127 to 142)  
(2000-2002 Crashes, PDO=1, Injury=8, Fatal = 20)



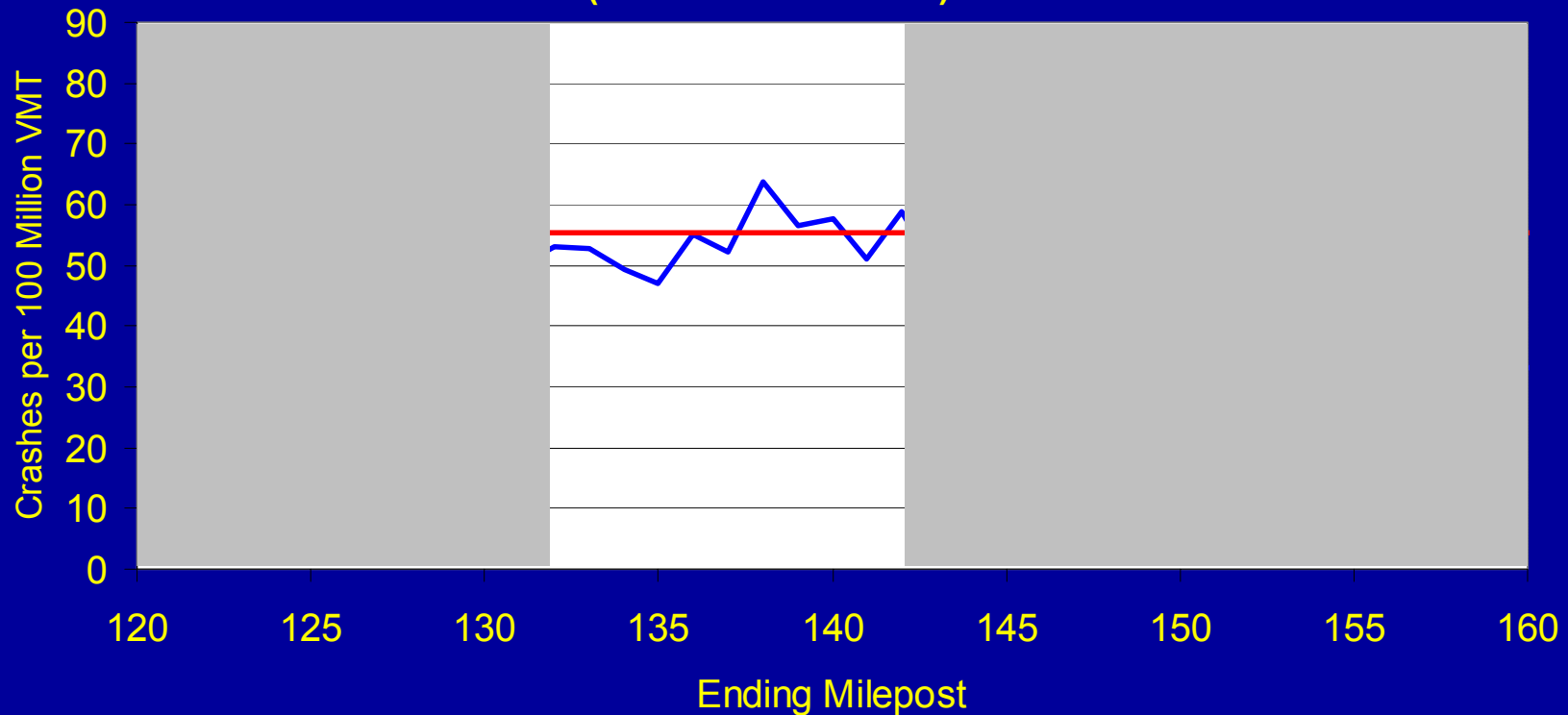
I-81 Crash Frequency I-81 Weighted Crash Frequency 150% Region 1 IS Weighted Average

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# Safety Zone Crash Rates

I-81 Crash Rate (MP 127 to 142)  
(2000-2002 Crashes)

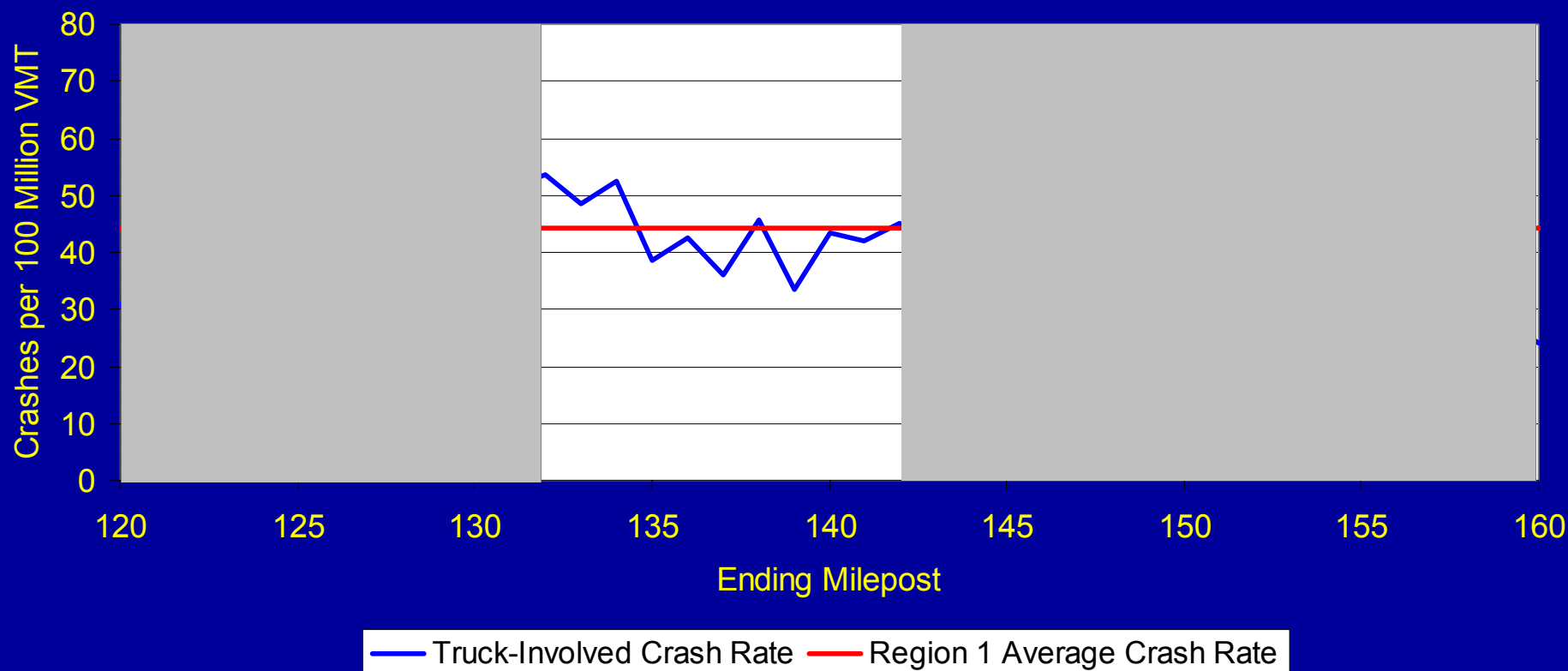


— Crash Rate — 125% Region 1 Average IS Crash Rate

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# Safety Zone Vehicle Mix

I-81 Truck Involved Crash Rate (MP 127 to 142)  
(2000-2002)



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# Proposed I-81 Zone

## MP 127 to MP 142

<u>Year</u>	<u>Fender Bender</u>	<u>Injury crash</u>	<u>Fatal crash</u>	<u>Total crashes</u>
2000	84	54	0	138
2001	103	38	0	141
2002	115	62	0	177
	<u>302</u>	<u>154</u>	<u>0</u>	<u>456</u>



# I-81 MP 127 to MP 142

## Crash Type Summary

<u><i>Crash Type</i></u>	<u><i>Percentage of Crashes</i></u>
Fixed Object – Off Road	29.8%
Rear End	26.6%
Sideswipe – Same Direction	15.2%
Deer/Other Animal	14.3%
Fixed Object – In Road	4.9%
Non-collision	4.9%
All Other Crashes	4.3%

# I-81 MP 127 to MP 142

## Major Factors in Crashes

<u>Major Factor</u>	<u>Percentage of Crashes</u>
Driver Inattention	58.4%
Road Slick	13.9%
Driver Handicap	7.5%
Driver Speeding	6.9%
Vehicle Defective	6.1%
Weather/Visibility Conditions	4.3%
Driver Under the Influence of Alcohol or Drugs	2.9%

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# Next Steps

- **Jan. - Dec. 2004**
  - Designate regional interstate zones
  - Hold public hearings for additional interstate zones
  - Launch public awareness campaign
- **Jan. - Dec. 2005**
  - Analyze potential primary highway zones
  - Monitor, evaluate & report annually

# Proposed I-81 Zone

## MP 127 to MP 142

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# Virginia's Highway Safety Corridor Program

Working Together To Make A Difference

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